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EPA Region 10
Office of the Regional Administrator

July 7, 2017

Via Certified Mail - Return Receipt Requested

Managing Agent

Pierce County Recycling, Composting and Disposal, LLC d/b/a/ LRI
17925 Meridian Street East
Puyallup, WA 98375

Via Certified Mail - Return Receipt Requested

Managing Agent

Pierce County Recycling, Composting and Disposal, LLC d/b/a/ LRI
30919 Meridian Street East
Graham, WA 98338

Via Certified Mail - Return Receipt Requested

Waste Connections of Washington, Inc.

12115 NE 99th Street, Suite 1830
Vancouver, WA 98682

Via Certified Mail - Return Receipt Requested

Waste Connections US, Inc.

3 Waterway Square Pl., #110
The Woodlands, TX 77380

**Re: NOTICE OF INTENT TO SUE UNDER THE CLEAN WATER ACT AND
REQUEST FOR COPIES OF STORMWATER POLLUTION PREVENTION
PLANS**

Dear Managing Agent:

We represent Puget Soundkeeper Alliance ("Soundkeeper"), 130 Nickerson St. #107, Seattle, WA 98109, (206) 297-7002. Any response or correspondence related to this matter should be directed to us at the letterhead address. This letter is to provide you with sixty days' notice of Puget Soundkeeper Alliance's intent to file a citizen suit against Pierce County Recycling, Composting and Disposal, LLC d/b/a/ LRI, Waste Connections of Washington, Inc., and Waste Connections US, Inc. (collectively referred to as "LRI") under section 505 of the Clean Water Act ("CWA"), 33 U.S.C. § 1365, for the violations described below. This letter is also a request for a copy of the complete and current stormwater pollution prevention plans ("SWPPPs") required by LRI's National Pollution Discharge Elimination System ("NPDES") permits.

LRI was granted coverage under Washington's Industrial Stormwater General Permit issued by the Washington Department of Ecology ("Ecology") on October 21, 2009, effective January 1, 2010, modified May 16, 2012, effective July 1, 2012, through January 1, 2015, under National Pollutant Discharge Elimination System Permit No. WAR002557 (the "2010 ISGP"). Ecology granted LRI coverage under the current iteration of the Industrial Stormwater General Permit, issued by Ecology on December 3, 2014, effective January 2, 2015, and set to expire on December 31, 2019 (the "2015 ISGP") and maintains the same permit number, WAR002557. The 2010 and 2015 ISGP are collectively referred to in this letter as the "ISGPs."

LRI was also granted coverage under Washington's Construction Stormwater General Permit issued by Ecology on December 1, 2010, effective January 1, 2011 through December 31, 2015, under National Pollutant Discharge Elimination System Permit No. WAR002603 (the "2011 CSGP"). Ecology granted LRI coverage under the current iteration of the Construction Stormwater General Permit, issued by Ecology on November 18, 2015, effective January 1, 2016, as modified by a modification effective May 5, 2017, and set to expire on December 31, 2020 (the "2016 CSGP") and maintains the same permit number, WAR002603. LRI's most recent application for renewal of CSGP coverage, dated July 7, 2015, identifies the project as the "LRI 304th Street Landfill," located at 30919 Meridian E., Graham, WA 98338, and describes the type of construction activity as "landfill construction and general grading," with a total site/project size of 168 acres, beginning in 1999 and estimated to be complete on December 31, 2044.

LRI has violated and continues to violate the CWA (see Sections 301 and 402 of the CWA, 33 USC §§ 1311 and 1342) and the terms and conditions of the 2010 ISGP, the 2015 ISGP, the 2011 GSGP, and the 2016 CSGP (collectively, the "Permits") with respect to operations of, and discharges of stormwater and pollutants from, its facility located at or about 30919 Meridian Street East, Graham, WA 98338 (the "facility") as described herein, to Muck Creek (also known as South Creek), an unnamed pond and tributary to Muck (South) Creek located between the northeast corner of the facility landfill and Muck (South) Creek, unnamed wetlands adjacent to and surrounding the facility, and unnamed wetlands that are adjacent to Muck (South) Creek, including mitigation wetlands constructed by LRI. The facility subject to this notice includes any contiguous or adjacent properties owned or operated by LRI.

1. VIOLATIONS OF THE ISGPs

1. COMPLIANCE WITH STANDARDS.

A. Violations of Water Quality Standards.

Condition S10.A of the ISGPs prohibits discharges that cause or contribute to violations of water quality standards. Water quality standards are the foundation of the CWA and Washington's efforts to protect clean water. In particular, water quality standards represent the U.S. Environmental Protection Agency ("EPA") and Ecology's determination, based on scientific studies, of the thresholds at which pollution starts to cause significant adverse effects on fish or other beneficial uses. For each water body in Washington, Ecology

designates the “beneficial uses” that must be protected through the adoption of water quality standards.

A discharger must comply with both narrative and numeric criteria water quality standards. WAC 173-201A-010; WAC 173-201A-510 (“No waste discharge permit can be issued that causes or contributes to a violation of water quality criteria, except as provided for in this chapter.”). Narrative water quality standards provide legal mandates that supplement the numeric criteria. Furthermore, the narrative water quality standard applies with equal force even if Ecology has established a numeric water quality standard. Specifically, Condition S10.A of the ISGPs require that LRI’s discharges not cause or contribute to an excursion of Washington State water quality standards.

LRI discharges to Muck (South) Creek, including via an unnamed tributary, and unnamed wetlands adjacent to the facility. LRI discharges stormwater that contains elevated levels of turbidity, total suspended solids (TSS), copper, and zinc, as indicated in the table of benchmark and numeric effluent limit excursions below (Table 1).

Table 1

Sample Date	Turbidity (Benchmark: 25 NTU)	TSS (Average monthly limit: 27 mg/L; Maximum daily limit: 88 mg/L	Copper (Benchmark 14 µg/L)	Zinc (Benchmark 117 µg/L; Average monthly limit: 110 µg/L; Maximum daily limit: 200 µg/L)
10/29/2012			24 µg/L	180 µg/L
3rd Quarter (September) 2013	48 mg/L	32 mg/L (average)		117
9/6/2013			18	190
10/1/2013			24	120
11/2/2015	92			
1/13/2016	36			
1/19/2016			41	
January, 2016				170
10/13/2016			5,100	37,000
10/17/2016	121		20	130
10/20/2016		5,600	1,500	14,000
10/24/2016	91			
October, 2016		43.7 (average)		
11/7/2016	55			
11/14/2016	39			

In addition, LRI’s discharges contain elevated levels of PCBs, lead, selenium, chromium, and arsenic, as shown by samples that Tacoma/Pierce County Health Department

collected on or about October 13 and 20, 2016. These discharges cause and/or contribute to violations of water quality standards for turbidity, toxic substances, and aesthetic criteria in Muck Creek, its tributary, and the unnamed wetlands adjacent to the facility, and have occurred each and every day during the last five years on which there was 0.1 inch or more of precipitation, and continue to occur. See WAC 173-201A-200, WAC 173-201A-240, WAC 173-201A-260. Precipitation data from Joint Base Lewis McChord is appended to this notice of intent to sue and identifies these days.

B. Compliance with Standards.

Condition S10.C of the ISGPs requires LRI to apply all known and reasonable methods of prevention, control and treatment ("AKART") to all discharges, including preparation and implementation of an adequate SWPPP and best management practices ("BMPs"). LRI has violated and continues to violate these conditions by failing to apply AKART to its discharges or to implement an adequate SWPPP and BMPs as evidenced by the elevated levels of pollutants in its discharge indicated in Table 1 and as described below in this notice of intent to sue.

Condition S1.A of the ISGPs requires that all discharges and activities authorized be consistent with the terms and conditions of the ISGPs. LRI has violated these conditions by discharging and acting inconsistent with the conditions of the ISGPs as described in this notice of intent to sue.

2. STORMWATER POLLUTION PREVENTION PLAN VIOLATIONS.

LRI is in violation of the ISGPs' SWPPP provisions as follows:

A. Condition S3.A.1 of the ISGPs requires LRI to develop and implement a SWPPP as specified. Condition S3.A.2 of the ISGPs require the SWPPP to specify BMPs necessary to provide AKART and ensure that discharges do not cause or contribute to violations of water quality standards. LRI has violated these requirements of the ISGPs each and every day during the last five years and continues to violate them as it has failed to prepare and/or implement a SWPPP that includes AKART BMPs and BMPs necessary to comply with state water quality standards.

B. Condition S3.A of the ISGPs requires LRI to have and implement a SWPPP that is consistent with permit requirements, fully implemented as directed by permit conditions, and updated as necessary to maintain compliance with permit conditions. LRI has violated these requirements of the ISGPs each and every day during the last five years and continues to violate them because its SWPPP is not consistent with permit requirements, has not been fully implemented and has not been updated as necessary.

C. The SWPPP fails to satisfy the requirements of Condition S3 of the ISGPs because it does not adequately describe BMPs. Condition S3.B.4 of the ISGPs require that the SWPPP include a description of the BMPs that are necessary for the facility to eliminate or reduce the potential to contaminate stormwater. Condition S3.A.3 of the ISGPs require

that the SWPPP include BMPs consistent with approved stormwater technical manuals, including the 2014 Stormwater Management Manual for Western Washington (available at <http://www.ecy.wa.gov/programs/wq/stormwater/manual.html>) or document how stormwater BMPs included in the SWPPP are demonstratively equivalent to the practices contained in the approved stormwater technical manuals, including the proper selection, implementation, and maintenance of all applicable and appropriate BMPs. LRI's SWPPP does not comply with these requirements because it does not adequately describe BMPs and does not include BMPs consistent with approved stormwater technical manuals nor does it include BMPs that are demonstratively equivalent to such BMPs with documentation of BMP adequacy.

D. LRI's SWPPP fails to satisfy the requirements of Condition S3.B.2 of the ISGPs because it fails to include a facility assessment as mandated. The SWPPP fails to include an adequate facility assessment because it does not describe the industrial activities conducted at the site, the general layout of the facility including buildings and storage of raw materials, the flow of materials through the facility, regular business hours and seasonal variations in business hours or in industrial activities as required.

E. LRI's SWPPP fails to satisfy the requirements of Condition S3.B.1 of the ISGPs because it does not include a site map that identifies significant features, the stormwater drainage and discharge structures, the stormwater drainage areas for each stormwater discharge point off-site, a unique identifying number for each discharge point, each sampling location with a unique identifying number, paved areas and buildings, areas of pollutant contact associated with specific industrial activities, conditionally approved non-stormwater discharges, surface water locations, areas of existing and potential soil erosion, vehicle maintenance areas, and lands and waters adjacent to the site that may be helpful in identifying discharge points or drainage routes.

F. LRI's SWPPP fails to comply with Condition S3.B.2.b of the ISGPs because it does not include an inventory of industrial activities that identifies all areas associated with industrial activities that have been or may potentially be sources of pollutants as required. The SWPPP does not identify all areas associated with loading and unloading of dry bulk materials or liquids, outdoor storage of materials or products, outdoor manufacturing and processing, onsite dust or particulate generating processes, on-site waste treatment, storage, or disposal, vehicle and equipment fueling, maintenance, and/or cleaning, roofs or other surfaces exposed to air emissions from a process area, and roofs or other surfaces composed of materials that may be mobilized by stormwater as required by these conditions.

G. LRI's SWPPP does not comply with Condition S3.B.2.c of the ISGPs because it does not include an adequate inventory of materials. The SWPPP does not include an inventory of materials that lists the types of materials handled at the site that potentially may be exposed to precipitation or runoff and that could result in stormwater pollution, a short narrative for material describing the potential for the pollutants to be present in stormwater discharge that is updated when data becomes available to verify the presence or absence of the pollutants, a narrative description of any potential sources of pollutants from past activities, materials and spills that were previously handled, treated, stored, or disposed of in a manner to allow ongoing exposure to stormwater as required. The SWPPP does not

include the method and location of on-site storage or disposal of such materials and a list of significant spills and significant leaks of toxic or hazardous pollutants as these permit conditions require.

H. LRI's SWPPP does not comply with Condition S3.B.3 of the ISGPs because it does not identify specific individuals by name or title whose responsibilities include SWPPP development, implementation, maintenance and modification.

I. Condition S3.B.4 of the 2010 Permit required that permittees include in their SWPPPs and implement certain mandatory BMPs no later than July 1, 2010 unless site conditions render the BMP unnecessary, infeasible, or an alternative and equally effective BMP is provided. Condition S3.B.4 of the 2015 Permit also requires that permittees include in their SWPPPs and implement mandatory BMPs subject to the same conditions. LRI is in violation of this requirement because it has failed to include in its SWPPP and implement the mandatory BMPs of the ISGPs.

J. LRI's SWPPP does not comply with Condition S3.B.4.b.i of the ISGPs because it does not include required operational source control BMPs in the following categories: good housekeeping (including definition of ongoing maintenance and cleanup of areas that may contribute pollutants to stormwater discharges, and a schedule/frequency for each housekeeping task); preventive maintenance (including BMPs to inspect and maintain stormwater drainage, source controls, treatment systems, and plant equipment and systems, and the schedule/frequency for each task); spill prevention and emergency cleanup plan (including BMPs to prevent spills that can contaminate stormwater, for material handling procedures, storage requirements, cleanup equipment and procedures, and spill logs); employee training (including an overview of what is in the SWPPP, how employees make a difference in complying with the SWPPP, spill response procedures, good housekeeping, maintenance requirements, and material management practices, how training will be conducted, the frequency/schedule of training, and a log of the dates on which specific employees received training); inspections and recordkeeping (including documentation of procedures to ensure compliance with permit requirements for inspections and recordkeeping, identification of personnel who conduct inspections, provision of a tracking or follow-up procedure to ensure that a report is prepared and appropriate action taken in response to visual monitoring, definition of how LRI will comply with signature and record retention requirements, and certification of compliance with the SWPPP and Permit).

K. LRI's SWPPP does not comply with Condition S3.B.4.b.i.7 of the ISGPs because it does not include measures to identify and eliminate the discharge of process wastewater, including landfill leachate, vehicle wash water, domestic wastewater, noncontact cooling water, and other illicit discharges to stormwater sewers, or to surface waters and ground waters of the state.

L. LRI's SWPPP does not comply with Condition S3.B.4.b.ii of the ISGPs because it does not include required structural source control BMPs to minimize the exposure of manufacturing, processing, and material storage areas to rain, snow, snowmelt, and runoff.

LRI's SWPPP does not comply with Condition S3.B.4.b.iii of the ISGPs because it does not include treatment BMPs as required.

M. LRI's SWPPP fails to comply with Condition S3.B.4.b.v of the ISGPs because it does not include BMPs to prevent the erosion of soils or other earthen materials and prevent off-site sedimentation and violations of water quality standards.

N. LRI's SWPPP fails to satisfy the requirements of Condition S3.B.5 of the ISGPs because it fails to include a stormwater sampling plan as required. The SWPPP does not include a sampling plan that: identifies points of discharge to surface waters, storm sewers, or discrete ground water infiltration locations; documents why each discharge point is not sampled; identifies each sampling point by its unique identifying number; identifies staff responsible for conducting stormwater sampling; specifies procedures for sampling collection and handling; specifies procedures for sending samples to the a laboratory; identifies parameters for analysis, holding times and preservatives, laboratory quantization levels, and analytical methods, and that specifies the procedure for submitting the results to Ecology.

3. MONITORING AND REPORTING VIOLATIONS.

A. Failure to Collect Quarterly Samples.

Condition S4.B of the ISGPs requires LRI to collect a sample of its stormwater discharge once during every calendar quarter. Condition S4.B.d requires that LRI obtain representative samples. Conditions S3.B.5.b and S4.B.2.c of the ISGPs require LRI to collect stormwater samples at each distinct point of discharge offsite except for substantially identical outfalls, in which case only one of the substantially identical outfalls must be sampled. These conditions set forth sample collection criteria, but require the collection of a sample even if the criteria cannot be met. LRI violated these requirements by failing to collect stormwater samples at any of its discharge points during the third quarters of 2014, 2015, and 2016.

LRI has also violated and continues to violate these conditions because it does not sample each distinct point of discharge off-site, including the discharge from the facility to Muck Creek that is located downstream of the facility's designated or usual sampling location, and the facility's discharge into the unnamed wetlands located upstream of the facility's designated or usual sample location, and because LRI does not collect representative samples of any of its discharges. These violations have occurred and continue to occur each and every quarter during the last five years that LRI was and is required to sample its stormwater discharges, including the quarters in which it collected stormwater discharge samples from some, but not each, point of discharge. These violations will continue until LRI commences monitoring all distinct points of discharge.

B. Failure to Comply with Visual Monitoring Requirements.

Condition S7.A of the ISGPs requires that monthly visual inspection be conducted at the facility by qualified personnel. Each inspection is to include observations made at stormwater sampling locations and areas where stormwater associated with industrial activity

is discharged, observations for the presence of floating materials, visible oil sheen, discoloration, turbidity, odor, etc. in the stormwater discharges, observations for the presence of illicit discharges, a verification that the descriptions of potential pollutant sources required by the permit are accurate, a verification that the site map in the SWPPP reflects current conditions, and an assessment of all BMPs that have been implemented (noting the effectiveness of the BMPs inspected, the locations of BMPs that need maintenance, the reason maintenance is needed and a schedule for maintenance, and locations where additional or different BMPs are needed).

Condition S7.C of the ISGPs requires that LRI record the results of each inspection in an inspection report or checklist that is maintained on-site and that documents the observations, verifications, and assessments required. The report/checklist must include the time and date of the inspection, the locations inspected, a statement that, in the judgment of the person conducting the inspection and the responsible corporate officer, the facility is either in compliance or out of compliance with the SWPPP and the ISGPs, a summary report and schedule of implementation of the remedial actions that LRI plans to take if the site inspection indicates that the facility is out of compliance, the name, title, signature and certification of the person conducting the facility inspection, and a certification and signature of the responsible corporate officer or a duly authorized representative.

LRI is in violation of these requirements of Condition S7 of the ISGPs because, during the last five years, it has failed to conduct each of the requisite visual monitoring and inspections, failed to prepare and maintain the requisite inspection reports or checklists, and failed to make the requisite certifications and summaries.

4. EFFLUENT LIMITATION VIOLATIONS.

Condition S5.C of the ISGPs imposes numeric effluent limitations on LRI's discharges. Discharge of pollutants at a level in excess of these numeric effluent limitations is a violation of the ISGP.

LRI has violated Condition S5.C of the 2015 ISGP by discharging zinc in excess of the average monthly limit of 110 µg/L as shown by the monitoring data in Table 2 below:

Table 2

Month	Average Zinc Concentration
September, 2013	117 µg/L
January, 2016	170 µg/L

LRI has violated Condition S5.C of the ISGPs by discharging zinc in excess of the maximum daily limit of 200 µg/L as shown by the monitoring data in Table 3 below:

Table 3

Month	Zinc Concentration
October 13, 2016	37,000 µg/L
October 20, 2016	14,000 µg/L

LRI has violated Condition S5.C of the ISGPs by discharging total suspended solids (TSS) in excess of the average monthly limit of 27 mg/L as shown by the monitoring data in Table 4 below:

Table 4

Month	Average TSS Concentration
September, 2013	32 mg/L
October, 2016	43.7 mg/L

5. ILLICIT AND PROHIBITED DISCHARGES.

A. Non-stormwater discharges

Condition S5.E of the ISGPs prohibits the discharge of process wastewater (including stormwater that comingles with process wastewater) and illicit discharges. Appendix 2 to the ISGPs defines “illicit discharges” as “any discharge that is not composed entirely of stormwater.” Condition S5.F of the ISGPs requires LRI to manage stormwater to prevent the discharge of synthetic, natural or processed oil or oil containing products as identified by an oil sheen, and trash and floating debris, prohibiting those discharges. LRI’s discharges of landfill leachate, vehicle wash water, oil, and concrete waste violate these Permit conditions. These violations occurred each time over the past five years when, in keeping with its usual practice, LRI discharged water and pollutants collected in its leak detection and collection system beneath the landfill into the facility’s concrete stormwater conveyance channel; when there was a landfill leachate seep or leak in the landfill leachate collection system; when there was an overflow of the facility’s wash water storage tank, and when oil and/or concrete waste was discharged into the facility’s stormwater conveyance channel.

Dates of these violations include: on or about December 14, 2013 when a leachate seep associated with a landfill gas collector caused leachate to discharge via a roadside ditch within the landfill cover footprint and the facility’s concrete stormwater conveyance channel; on or about October 31, 2015 when stormwater comingled with vehicle wash water flowed directly into the unnamed tributary to Muck (South) Creek, just above its confluence with the Creek; on or about May 25-31, 2016, when the facility’s landfill leachate forcemain leaked a substantial amount of leachate into the leak detection and collection system which was then discharged via the concrete stormwater channel and into Muck Creek and/or its unnamed tributary and unnamed wetlands adjacent to the facility; October 13 and 20, 2016 when Tacoma/Pierce County Health Department and/or Ecology documented substantial volumes of landfill leachate discharging via the concrete stormwater channel as described in the inspection report attached to Ecology inspector Paul Stasch’s March 9, 2017 letter to LRI; on or about December 18, 2016 when a pipe fitting at the facility’s landfill gas to energy facility failed and leachate discharged via the concrete stormwater channel; and May 29-30, 2017 when an estimated 240 gallons of leachate seeped out of a temporary slope in the landfill and discharged via the stormwater conveyance channel. In addition, illicit discharges from LRI’s

leak detection and collection system occur on a regular basis. LRI has documents and information identifying in more detail the dates on which illicit discharges occurred.

Condition S7.B.3.b of the ISGPs also requires LRI to eliminate illicit discharges within 30 days of discovery; and Condition S3.B.4.b.i.7 of the ISGPs require LRI's SWPPP to include measures to identify and eliminate illicit discharges to surface waters. LRI violated these requirements by failing to eliminate its illicit discharges altogether over the last five years.

Additionally, Condition S7.B.3.a of the ISGPs requires LRI to notify the Department of Ecology within seven days of any discovery of an illicit discharge. LRI violated this requirement by failing to notify Ecology about its illicit discharges within seven days of each occurrence over the past five years.

B. Comingled construction stormwater discharges.

Condition S1.D.3 of the ISGPs excludes from ISGP coverage all construction activities. Conditions G1 and G19 of the ISGPs prohibit discharges that are inconsistent with and/or not specifically authorized by the ISGP. LRI violates Conditions S1.C, G1, and G20 by failing to clearly delineate and separate areas of the facility that are subject to the CSGP from areas of the facility that are subject to the ISGP, and thereby discharging stormwater that is associated with construction activity from the area that is subject to the ISGP. These violations have occurred each and every day during the last five years on which there was 0.1 inch or more of precipitation, and continue to occur.

6. VIOLATIONS OF THE RECORDKEEPING REQUIREMENTS.

A. Failure to Record Information.

Condition S4.B.3 of the ISGPs requires LRI record and retain specified information for each stormwater sample taken, including the sample date and time, a notation describing if LRI collected the sample within the first 30 minutes of stormwater discharge event, an explanation of why LRI could not collect a sample within the first 30 minutes of a stormwater discharge event, the sample location, method of sampling and of preservation, and the individual performing the sampling. Upon information and belief, LRI is in violation of these conditions as it has not recorded each of these specified items for each sample taken during the last five years.

B. Failure to Retain Records.

Condition S9.C of the ISGPs requires LRI to retain for a minimum of five years a copy of the current Permit, a copy of LRI's coverage letter, records of all sampling information, inspection reports including required documentation, any other documentation of compliance with permit requirements, all equipment calibration records, all BMP maintenance records, all original recordings for continuous sampling instrumentation, copies of all laboratory results, copies of all required reports, and records of all data used to complete

the application for the Permit. LRI is in violation of these conditions because it has failed to retain records of such information, reports, and other documentation during the last five years.

7. FAILURE TO REPORT PERMIT VIOLATIONS.

Condition S9.E of the ISGPs requires LRI to take certain actions in the event LRI is unable to comply with any of the terms and conditions of the ISGPs which may endanger human health or the environment, or exceed any numeric effluent limitation in the permit. In such circumstances, LRI must immediately take action to minimize potential pollution or otherwise stop the noncompliance and correct the problem, and LRI must immediately notify the appropriate Ecology regional office of the failure to comply. LRI must then submit a detailed written report to Ecology, including specified details, within 5 days of the time LRI became aware of the circumstances unless Ecology requests an earlier submission.

LRI routinely violates these requirements, including each and every time LRI exceeded water quality standards, as specified in section 1.1.A of this notice of intent to sue, above, violated numeric effluent limits, as specified in Tables 2, 3 and 4, above, each and every time LRI discharges illicit and/or non-stormwater discharges, as described in section 1.V to this notice of intent to sue, above. All these violations endanger human health or the environment.

8. REQUEST FOR ISGP SWPPP.

Pursuant to Condition S9.F of the 2015 Permit, Puget Soundkeeper Alliance hereby requests that LRI provide a copy of, or access to, its SWPPP complete with all incorporated plans, monitoring reports, checklists, and training and inspection logs. The copy of the SWPPP and any other communications about this request should be directed to the undersigned at the letterhead address.

Should LRI fail to provide the requested complete copy of, or access to, its SWPPP as required by Condition S9.F of the 2015 Permit, it will be in violation of that condition, which violation shall also be subject to this notice of intent to sue and any ensuing lawsuit.

2. VIOLATIONS OF THE CSGP

1. ILLICIT AND PROHIBITED DISCHARGES

Condition S1.D of the CSGPs prohibits the discharge of process wastewater, fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance, soaps or solvents used in vehicle and equipment washing, and wheel wash wastewater (unless managed according to Special Condition S9.D.9 of the CSGPs), among other pollutants. LRI is in violation of Condition S1.D of the CSGPs because the discharges identified in section 1.5 of this notice letter are prohibited discharges.

Condition S1.C of the CGSPs authorizes discharges of stormwater associated with construction activity and construction support activity, and limited non-stormwater

discharges. Conditions G1 and G20 of the CSGPs prohibit discharges that are inconsistent with and/or not specifically authorized by the CSGP. LRI is in violation of these conditions because the discharges identified in section 1.5 of this notice letter are not authorized discharges.

LRI also violates Conditions S1.C, G1, and G20 by failing to clearly delineate and separate areas of the facility that are subject to the CSGP from areas of the facility that are subject to the ISGP, and thereby discharging stormwater that is not associated with construction activity or construction support activity from the area that is subject to the CSGP. These violations have occurred each and every day during the last five years on which there was 0.1 inch or more of precipitation, and continue to occur.

2. COMPLIANCE WITH STANDARDS

A. Violations of Water Quality Standards.

Condition S3.A of the CSGPs prohibits discharges that cause or contribute to a violation of surface water quality standards (Chapter 173-201A WAC), ground water quality standards (Chapter 173-200 WAC), sediment management standards (Chapter 173-204 WAC), and human health-based criteria in the National Toxics Rule (40 CFR Part 131.36). LRI discharges to Muck (South) Creek, including via an unnamed tributary, and unnamed wetlands adjacent to the facility. LRI discharges stormwater that contains elevated levels of turbidity as indicated in the table of monitoring data below (Table 5). These discharges cause and/or contribute to violations of water quality standards for pH, turbidity and aesthetic criteria in Muck Creek, its tributary, and the unnamed wetlands adjacent to the facility, and have occurred each and every day during the last five years on which there was 0.1 inch or more of precipitation, and continue to occur.

Table 5

Date	Turbidity measured (Benchmark: 25 NTU)	pH
4/26/2012		6.4 standard units
9/6/2013	89 NTU	
9/7/2013	101	
9/30/2013	85	
10/1/2013	88	
10/2/2013	48	
10/27/2014	41	
11/2/2015	92	
01/13/2016	36	6.4
10/17/2016	121	
10/24/2016	91	
11/7/2016	55	
11/14/2016	39	

B. Compliance with Standards.

Condition S3.B of the CSGPs requires that LRI apply AKART prior to the discharge of stormwater and non-stormwater to waters of the State, including groundwater. AKART includes the preparation and implementation of an adequate stormwater pollution prevention plan (SWPPP), with all appropriate BMPs installed and maintained in accordance with the SWPPP and the terms and conditions of the CSGP. LRI has violated and continues to violate these conditions by failing to apply AKART to its discharges or to implement an adequate SWPPP and BMPs as evidenced by the elevated levels of pollutants in its discharge indicated in Table 5, as identified by Ecology in its report concerning its January 17, 2017 CSGP compliance inspection of the facility, and as described below in this notice of intent to sue.

3. STORMWATER POLLUTION PREVENTION PLAN VIOLATIONS.

Condition S9 of the CSGPs requires LRI to prepare and properly implement a SWPPP that meets CSGP requirements and meets the objectives of implementing BMPs that prevent erosion and sedimentation, identifies, reduces, eliminates, or prevents stormwater contamination and water pollution; prevents violations of water quality standards; and controls peak volumetric flow rates and velocities of stormwater discharges. LRI is in violation of this condition and has been each day of the last five years because it has failed to prepare and implement a SWPPP that meets CSGP requirements, including for the reasons set forth below, and because it fails to meet the objectives of Condition S9.A, as indicated by the violations described in sections 2.1 and 2.2 of this notice letter, and as described below.

Condition S9.B.1 of the CSGPs requires that LRI's SWPPP include clear documentation including: (a.) information about existing site conditions (topography, drainage, soils, vegetation, etc.); (b.) potential erosion problem areas; (c.) the elements of a SWPPP in Condition S9.D. of the CSGP, including BMPs used to address each element; (d.) construction phasing/sequence and general BMP implementation schedule; (e.) the actions to be taken if BMP performance goals are not achieved—for example, a contingency plan for additional treatment and/or storage of stormwater that would violate the water quality standards if discharged; and (f.) engineering calculations for ponds, treatment systems, and any other designed structures. LRI is in violation of Condition S9.B.1 because its SWPPP lacks the required documentation, including an adequate contingency plan and engineering calculations for required pollution controls.

Condition S9.B.2 of the CSGPs requires LRI to modify the SWPPP within seven (7) days of an inspection by LRI or applicable local or state regulatory authority during which it is determined that the SWPPP is or would be ineffective in eliminating or significantly minimizing pollutants in the discharges from the site. Condition S9.B.2 further requires that LRI to immediately begin the process to fully implement and maintain appropriate source control and/or treatment BMPs as soon as possible, addressing the problems no later than ten (10) days from the inspection or investigation, and to document BMP implementation in the site log book. LRI must also modify the SWPPP whenever there is a change in design, construction, operation, or maintenance at the construction site that has, or could have, a significant effect on the discharge of pollutants to waters of the State. LRI is in violation of

Condition S9.B.2 because it has failed to modify its SWPPP and implement and document appropriate BMPs as required, including in response to Ecology's June 26, 2014 and January 17, 2017 inspections during which it was determined that LRI's SWPPP BMPs were insufficient.

Condition S9.C of the CSGPs requires that LRI's BMPs be consistent with approved stormwater management manuals, including the Stormwater Management Manual for Western Washington, or, if properly documented in the SWPPP, that LRI's BMPs provide an equivalent level of pollution prevention compared to the applicable stormwater management manuals. LRI is in violations of Condition S9.C because its BMPs are not consistent with the Stormwater Management Manual for Western Washington and do not provide an equivalent level of pollution prevention to those BMPs, including BMP C241 in the Stormwater Management Manual for Western Washington.

Condition S9.D of the 2016 CSGP requires that LRI include each of the following thirteen (13) elements Condition S9.D.1-13 in the narrative of the SWPPP and implement them unless site conditions render the element unnecessary and the exemption from that element is clearly justified in the SWPPP: (1) preserve vegetation/mark clearing limits; (2) establish construction access; (3) control flow rates; (4) install sediment controls; (5) stabilize soils; (6) protect slopes; (7) protect drain inlets; (8) stabilize channels and outlets; (9) control pollutants; (10) control dewatering; (11) maintain BMPs; (12) manage the project; and (13) protect low impact development (LID) BMPs. Condition S9.D of the 2011 CSGP contained a substantially identical requirement, except that it did not include element 13. LRI is in violation of Condition S9.D because it has not documented and implemented the elements as required, including as described in Ecology's inspection reports for the June 26, 2014 and January 17, 2017 inspections.

Condition S9.E of the CSGPs requires that LRI's SWPPP include a vicinity map with enough detail to identify the location of the construction site and receiving waters within one mile, and a legible site map or maps. The site map(s) must identify the features listed in Condition S9.E.1-11, including the locations of cut and fill slopes, soil disturbance areas, BMPs, off-site material, waste storage, borrow areas, and vehicle/equipment storage, water bodies, discharges offsite and/or to a surface waterbody, required water quality sampling stations, stabilized areas, existing and proposed LID facilities. The site map(s) must also identify slopes, contours, and direction of stormwater flow before and after major grading activities. LRI is in violation of Condition S9.E because its SWPPP lacks maps that identify all of the required features.

4. BENCHMARK EXCEEDANCES AND RESPONSES.

Condition S4.C.5 of the CSGPs requires LRI to take actions in response to discharges in excess of the turbidity benchmark of 25 NTU. If the discharge turbidity is 26 to 249 NTU, Condition S4.C.5.a requires LRI to review the SWPPP for compliance with Condition S9 and make appropriate revisions within seven (7) days of the date the discharge exceeded the benchmark, to immediately begin the process to fully implement appropriate BMPs, and to fully implement and maintain appropriate source control and/or treatment BMPs as soon as

possible, addressing the problems within 10 days of the date the discharge exceeded the benchmark. LRI must also document BMP implementation and maintenance in the site log book.

LRI is in violation of Condition S4.C.5 because it has failed to timely take the required corrective actions in response to each of the turbidity benchmark exceedances identified in Table 5 of this notice of intent to sue.

5. MONITORING AND REPORTING VIOLATIONS.

A. Failure to comply with sampling requirements.

i. Turbidity sampling requirements

Condition S4.C of the CSGPs requires LRI to sample for turbidity all discharge points at least once every calendar week when stormwater (or authorized non-stormwater) discharges from the site or enters any on-site surface waters of the state. Samples must be representative of the flow and characteristics of the discharge. Sampling is required at all points where stormwater associated with construction activity (or authorized non-stormwater) is discharged off site, including where it enters any on-site surface waters of the state. Condition S4.C.3.c of the CSGPs requires LRI to identify all sampling point(s) on the SWPPP site map and clearly mark these points in the field with a flag, tape, stake or other visible marker.

LRI is in violation of Condition S4.C and has violated its sampling requirements each week during the last five years when there was 0.1 inches of precipitation or more, including because LRI is not collecting samples at and has not marked the required locations, because samples it has collected are not representative of the flow and characteristics of LRI's discharge or stormwater associated with construction activity, and because it has failed to collect weekly samples in July, August, September, and October, 2012; July, August, and September, 2013; July, August, September, and October, 2014; June, July, and October, 2015; and June and October, 2016.

ii. pH sampling requirements

Condition S4.D of the CSGPs requires LRI to obtain a representative sample of stormwater and conduct pH analysis at least once per week. LRI must sample the pH in the sediment trap/pond(s) or other locations that receive stormwater runoff from the area of significant concrete work or engineered soils before the stormwater discharges to surface waters. LRI is in violation of Condition S4.D because it has failed to collect representative samples from the required locations, and failed to collect weekly samples in July, August, September, and October, 2012; July, August, and September, 2013; July, August, September, and October, 2014; June, July, and October, 2015; and June and October, 2016.

B. Failure to comply with visual monitoring requirements.

Condition S4.B of the CSGPs requires LRI to have a certified erosion and sediment control lead ("CESCL") inspect all areas disturbed by construction activities, all BMPs, and all stormwater discharge points at least once every calendar week and within 24 hours of any discharge from the site. Inspections must include visual examination of stormwater for the presence of suspended sediment, turbidity, discoloration, and oil sheen; an evaluation of the effectiveness of BMPs; and determination of whether it is necessary to install, maintain, or repair BMPs to improve the quality of stormwater discharges. Condition S4.B.5 requires LRI to summarize the results of each inspection, including the details listed in Condition S4.B.5.a.-g., a report and schedule of implementation for remedial actions, and a signed certification, in an inspection report or checklist and enter the report/checklist into, or attach it to, the site log book. LRI is in violation of these requirements because during the last five years, it has failed to conduct all of the requisite visual monitoring and inspections, failed to prepare and maintain the requisite inspection reports or checklists, and failed to make the requisite certifications and summaries.

Condition S4.B.1 of the CSGPs requires LRI to correct problems identified by its inspections by reviewing the SWPPP for compliance with Condition S9 and making appropriate revisions within seven (7) days of the date of the inspection, immediately beginning the process of fully implementing and maintaining appropriate source control and/or treatment BMPs as soon as possible, addressing the problems within 10 days of the date of the inspection. LRI must also document BMP implementation and maintenance in the site log book. LRI is in violation of Condition S4.B.1 because it has failed to timely correct problems identified by its inspections.

6. VIOLATIONS OF THE RECORDKEEPING REQUIREMENTS.

A. Failure to record information.

Condition S4.A of the CSGPs requires LRI to maintain a site log book that contains a record of the implementation of the SWPPP and other permit requirements, including the installation and maintenance of BMPs, site inspections, and stormwater monitoring. LRI is in violation of these conditions as it has not recorded all of the information in its log book as required.

Condition S5.D of the CSGPs requires LRI record and retain specified information for each sample taken, including the sample date, place, method, and time of sampling, date of analysis, and the individual performing the sampling. LRI is in violation of these conditions as it has not recorded each of these specified items for each sample taken during the last five years.

B. Failure to Retain Records.

Condition S5.C of the CSGPs requires LRI to retain records of all monitoring information (site log book, sampling results, inspection reports/checklists, etc.), SWPPP, copy

of the permit coverage letter (including Transfer of Coverage documentation), all calibration and maintenance records, records of all data used to complete the application for this permit, and any other documentation of compliance with permit requirements for the entire life of the construction project and for a minimum of three years following the termination of permit coverage. LRI is in violation of these conditions because it has failed to retain records of such information, reports, and other documentation during the last five years.

7. REQUEST FOR CSGP SWPPP.

Pursuant to Condition S5.G.2.b of the 2016 CSGP, Puget Soundkeeper Alliance hereby requests that LRI provide a copy of, or access to, its SWPPP complete with all incorporated plans, monitoring reports, checklists, and training and inspection logs. The copy of the SWPPP and any other communications about this request should be directed to the undersigned at the letterhead address.

Should LRI fail to provide the requested complete copy of, or access to, its SWPPP as required by Condition S5.G of the CSGP, it will be in violation of that condition, which violation shall also be subject to this notice of intent to sue and any ensuing lawsuit.

3. UNPERMITTED DISCHARGES

Section 301(a) of the Clean Water Act, 33 U.S.C. § 1311(a) prohibits the discharge of pollutants via a point source to waters of the United States, except as in compliance with a NPDES permit. LRI is in violation of 33 U.S.C. § 1311(a) because it discharges landfill leachate (including heavy metals such as copper, zinc, lead, selenium, chromium, and arsenic; PCBs; oxygen-demanding substances; and suspended solids), vehicle wash water (including oil and grease, heavy metals, nutrients, suspended solids, and oxygen-demanding substances), oil, and concrete waste to Muck (South) Creek and its unnamed tributary and the unnamed wetlands adjacent to the facility via landfill seeps, pipes, ditches, and channels. These discharges of landfill leachate are not authorized by any NPDES permit that LRI holds.

These violations occurred each time over the past five years when, in keeping with its usual practice, LRI discharged water and pollutants collected in its leak detection and collection system beneath the landfill into the facility's concrete stormwater conveyance channel; when there was a landfill leachate seep or leak in the landfill leachate collection system; when there was an overflow of the facility's wash water storage tank, and when oil and/or concrete waste was discharged into the facility's stormwater conveyance channel.

Dates of these violations include: on or about December 14, 2013 when a leachate seep associated with a landfill gas collector caused leachate to discharge via a roadside ditch within the landfill cover footprint and the facility's concrete stormwater conveyance channel; on or about October 31, 2015 when stormwater comingled with vehicle wash water flowed directly into the unnamed tributary to Muck (South) Creek, just above its confluence with the Creek; on or about May 25-31, 2016, when the facility's landfill leachate forcemain leaked a substantial amount of leachate into the leak detection and collection system which was then discharged via the concrete stormwater channel and into Muck Creek and/or its unnamed

tributary and unnamed wetlands adjacent to the facility; October 13 and 20, 2016 when Tacoma/Pierce County Health Department and/or Ecology documented substantial volumes of landfill leachate discharging via the concrete stormwater channel as described in the inspection report attached to Ecology inspector Paul Stasch's March 9, 2017 letter to LRI and the sample results of which are summarized in Table 1 of this notice letter; on or about December 18, 2016 when a pipe fitting at the facility's landfill gas to energy facility failed and leachate discharged via the concrete stormwater channel; and May 29-30, 2017 when an estimated 240 gallons of leachate seeped out of a temporary slope in the landfill and discharged via the stormwater conveyance channel. In addition, unpermitted discharges from LRI's leak detection and collection system occur on a regular basis. LRI has documents and information identifying in more detail the dates on which unpermitted discharges occurred.

4. CONCLUSION


The above-described violations reflect those indicated by the information currently available to Puget Soundkeeper Alliance. These violations are ongoing. Puget Soundkeeper Alliance intends to sue for all violations, including those yet to be uncovered and those committed after the date of this Notice of Intent to Sue.

Under Section 309(d) of the CWA, 33 U.S.C. § 1319(d), each of the above-described violations subjects the violator to a penalty of up to \$37,500 per day for each violation that occurred through November 2, 2015, and \$52,414 per day for each violation that occurred thereafter. In addition to civil penalties, Puget Soundkeeper Alliance will seek injunctive relief to prevent further violations under Sections 505(a) and (d) of the CWA, 33 U.S.C. § 1365(a) and (d), and such other relief as is permitted by law. Also, Section 505(d) of the CWA, 33 U.S.C. § 1365(d), permits prevailing parties to recover costs, including attorney's fees.

Puget Soundkeeper Alliance believes that this notice of intent to sue sufficiently states grounds for filing suit. We intend, at the close of the 60-day notice period, or shortly thereafter, to file a citizen suit against LRI under Section 505(a) of the Clean Water Act for violations.

During the 60-day notice period, we would be willing to discuss effective remedies for the violations addressed in this letter and settlement terms. If you wish to pursue such discussions in the absence of litigation, we suggest that you initiate those discussions within 10 days of receiving this notice so that a meeting can be arranged and so that negotiations may be completed promptly. We do not intend to delay the filing of a complaint if discussions are continuing when the notice period ends.

Sincerely,
SMITH & LOWNEY, PLLC

By: 
Richard A. Smith
Claire E. Tonry

cc: Scott Pruitt Administrator, U.S. EPA

Michelle Pirzadeh, Acting Region 10 Administrator, U.S. EPA

Maia Bellon, Director, Washington Department of Ecology

Corporation Service Company, Registered Agent of Pierce County Recycling,
Composting and Disposal, LLC (300 Deschutes Way SW, Ste 304, Tumwater, WA
98501)

Corporation Service Company, Registered Agent of Waste Connections of
Washington, Inc. (300 Deschutes Way SW, Ste 304, Tumwater, WA 98501)

Corporation Service Company, Registered Agent of Waste Connections US, Inc.
(2710 Gateway Oaks Dr., Ste 150N, Sacramento, CA 95833)

Date Precipitation (inches)

Date Precipitation (inches)

Date Precipitation (inches)

2012	
Jul	sum
1	0
2	0.03
3	0.13
4	0
5	0
6	0
7	0
8	0
9	0
10	0
11	0
12	0
13	0.01
14	0
15	0
16	0.11
17	0
18	0
19	0
20	0.62
21	0
22	0
23	0
24	0
25	0
26	0
27	0
28	0
29	0
30	0
31	0
2012	
Aug	sum
1	0
2	0
3	0
4	0
5	0
6	0
7	0
8	0

9	0
10	0
11	0
12	0
13	0
14	0
15	0
16	0
17	0
18	0
19	0
20	0
21	0
22	0
23	0
24	0
25	0
26	0
27	0
28	0
29	0
30	0
31	0
2012	
Sep	sum
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2	0
3	0
4	0
5	0
6	0
7	0
8	0
9	0
10	0
11	0
12	0
13	0
14	0
15	0
16	0
17	0
18	0

19	0
20	0
21	0
22	0
23	0
24	0
25	0
26	0
27	0
28	0
29	0.01
30	0
2012	
Oct	sum
1	0
2	0
3	0
4	0
5	0
6	0
7	0
8	0
9	0
10	0
11	0
12	0.05
13	0.32
14	0.29
15	0.33
16	0
17	0
18	0.33
19	0.17
20	0.18
21	0.24
22	0.33
23	0
24	0.17
25	0
26	0.13
27	0.76
28	0.23
29	0.59

Date Precipitation (inches)

Date Precipitation (inches)

Date Precipitation (inches)

30 0.92
31 0.42

2012

Nov sum

1 0.53
2 0.23
3 0.02
4 0.11
5 0.05
6 0.02
7 0
8 0
9 0
10 0
11 0.64
12 0.07
13 0.14
14 0
15 0
16 0.18
17 0.33
18 0.36
19 1.73
20 0.11
21 0.27
22 0.02
23 0.73
24 0.01
25 0
26 0
27 0
28 0.07
29 0.1
30 1.04

2012

Dec sum

1 0.32
2 0.51
3 0.36
4 0.54
5 0.11
6 0.25
7 0.22

8 0

9 0.09

10 0.06

11 0.17

12 0

13 0.05

14 0.22

15 0.05

16 0.91

17 0.27

18 0.21

19 0.76

20 0.35

21 0.01

22 0.08

23 0.27

24 0.02

25 0.44

26 0.25

27 0.01

28 0

29 0.09

30 0

31 0

2013

Jan sum

1 0
2 0
3 0.1
4 0.02
5 0.05
6 0.12
7 0.12
8 0.22
9 0.81
10 0.01
11 0
12 0
13 0
14 0
15 0
16 0
17 0

18 0

19 0

20 0

21 0

22 0

23 0.12

24 0.15

25 0.1

26 0.01

27 0.09

28 0.14

29 0.13

30 0.15

31 0.05

2013

Feb sum

1 0
2 0
3 0.02
4 0
5 0.12
6 0.05
7 0.05
8 0
9 0
10 0
11 0.02
12 0
13 0.03
14 0
15 0
16 0.03
17 0.02
18 0
19 0.01
20 0.08
21 0.09
22 0.49
23 0
24 0.01
25 0.12
26 0
27 0.1

Date Precipitation (inches)

Date Precipitation (inches)

Date Precipitation (inches)

28 0.56
2013

Mar sum

1 0.02
2 0.09
3 0
4 0
5 0.03
6 0.43
7 0.23
8 0
9 0
10 0.05
11 0.08
12 0.09
13 0.15
14 0.05
15 0.15
16 0.13
17 0.06
18 0.01
19 0.32
20 0.51
21 0.01
22 0
23 0
24 0
25 0
26 0
27 0
28 0.15
29 0
30 0
31 0

2013

Apr sum

1 0
2 0
3 0
4 0.18
5 0.9
6 0.58
7 0.91

8 0
9 0
10 0.22
11 0
12 0.24
13 0.11
14 0.35
15 0
16 0
17 0
18 0.05
19 0.47
20 0
21 0.03
22 0
23 0
24 0
25 0
26 0
27 0.03
28 0.1
29 0.02
30 0

2013

May sum

1 0
2 0
3 0
4 0
5 0
6 0
7 0
8 0
9 0
10 0
11 0
12 0.1
13 0.29
14 0
15 0.06
16 0
17 0.25
18 0.09

19 0.03
20 0
21 0.51
22 0.53
23 0.5
24 0.22
25 0.01
26 0.4
27 0.4
28 0.1
29 0.28
30 0.24
31 0

2013

Jun sum

1 0
2 0
3 0
4 0
5 0
6 0
7 0
8 0
9 0
10 0
11 0.05
12 0.2
13 0.12
14 0
15 0
16 0
17 0
18 0.01
19 0
20 0.12
21 0
22 0
23 0.65
24 0.26
25 0.26
26 0.02
27 0.26
28 0.01

Date Precipitation (inches)

Date Precipitation (inches)

Date Precipitation (inches)

	29	0
	30	0
2013		
Jul	sum	
	1	0
	2	0
	3	0
	4	0
	5	0
	6	0
	7	0
	8	0
	9	0
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	29	0
	30	0
	31	0
2013		
Aug	sum	
	1	0
	2	0.03
	3	0
	4	0
	5	0
	6	0

	7	0
	8	0
	9	0.01
	10	0.06
	11	0
	12	0
	13	0
	14	0.09
	15	0.03
	16	0
	17	0
	18	0
	19	0
	20	0
	21	0
	22	0
	23	0
	24	0
	25	0
	26	0.04
	27	0
	28	0.24
	29	0.4
	30	0
	31	0
2013		
Sep	sum	
	1	0
	2	0
	3	0.42
	4	0.01
	5	0.59
	6	1.44
	7	0
	8	0
	9	0
	10	0
	11	0
	12	0
	13	0
	14	0
	15	0
	16	0.06

	17	0
	18	0
	19	0
	20	0.15
	21	0
	22	0.57
	23	0.14
	24	0.34
	25	0.24
	26	0
	27	0.05
	28	1.65
	29	0.59
	30	1.53
2013		
Oct	sum	
	1	0.68
	2	0.17
	3	0.03
	4	0
	5	0
	6	0.03
	7	0.15
	8	0.07
	9	0
	10	0.04
	11	0
	12	0.16
	13	0
	14	0
	15	0
	16	0
	17	0
	18	0
	19	0.01
	20	0.01
	21	0
	22	0
	23	0.01
	24	0.01
	25	0
	26	0.01
	27	0.03

Date Precipitation (inches)

Date Precipitation (inches)

Date Precipitation (inches)

28	0
29	0
30	0
31	0.05
2013	
Nov	sum
1	0.01
2	0.52
3	0
4	0.04
5	0.08
6	0.12
7	0.72
8	0
9	0.05
10	0.01
11	0
12	0.16
13	0.04
14	0.02
15	0.24
16	0.01
17	0.6
18	0.46
19	0.09
20	0
21	0
22	0
23	0
24	0
25	0
26	0
27	0
28	0
29	0
30	0.07
2013	
Dec	sum
1	0.47
2	0
3	0.01
4	0
5	0

6	0
7	0
8	0
9	0
10	0
11	0
12	0.29
13	0.02
14	0
15	0.04
16	0
17	0
18	0
19	0
20	0.37
21	0.14
22	0.02
23	0.08
24	0
25	0
26	0
27	0
28	0
29	0
30	0
31	0.04
2014	
Jan	sum
1	0.01
2	0.13
3	0
4	0
5	0
6	0.14
7	0.51
8	0.33
9	0.3
10	0.24
11	0.98
12	0.12
13	0.02
14	0
15	0

16	0
17	0
18	0
19	0
20	0
21	0
22	0
23	0
24	0
25	0
26	0
27	0
28	0.37
29	0.78
30	0.08
31	0.05
2014	
Feb	sum
1	0.03
2	0
3	0
4	0
5	0
6	0
7	0
8	0.05
9	0.18
10	0.37
11	0.54
12	0.18
13	0.09
14	0.24
15	0.47
16	1.11
17	1.19
18	0.62
19	0.17
20	0.23
21	0.03
22	0.06
23	0.23
24	0.65
25	0.02

Date Precipitation (inches)

Date Precipitation (inches)

Date Precipitation (inches)

26	0
27	0
28	0
2014	
Mar	sum
1	0.01
2	0.56
3	0.41
4	0.54
5	1.34
6	0.36
7	0
8	1.08
9	0.44
10	0.61
11	0
12	0
13	0
14	0.25
15	0.18
16	1.04
17	0
18	0.02
19	0.24
20	0
21	0
22	0
23	0
24	0
25	0.12
26	0.16
27	0.28
28	0.47
29	0.79
30	0.09
31	0
2014	
Apr	sum
1	0
2	0
3	0.07
4	0.08
5	0.18

6	0.02
7	0
8	0.21
9	0
10	0
11	0
12	0
13	0
14	0
15	0
16	0.18
17	0.53
18	0
19	0.5
20	0.02
21	0.5
22	0.62
23	0.35
24	0.27
25	0
26	0.09
27	0.4
28	0.03
29	0
30	0
2014	
May	sum
1	0
2	0
3	0.66
4	0.48
5	0.08
6	0
7	0
8	0.5
9	0.31
10	0
11	0
12	0
13	0
14	0
15	0
16	0

17	0
18	0.36
19	0
20	0
21	0
22	0
23	0.16
24	0
25	0.33
26	0.02
27	0
28	0.01
29	0
30	0
31	0
2014	
Jun	sum
1	0
2	0
3	0
4	0
5	0
6	0
7	0
8	0
9	0.01
10	0
11	0
12	0.06
13	0.19
14	0
15	0
16	0.03
17	0.02
18	0
19	0
20	0.01
21	0
22	0
23	0.01
24	0
25	0
26	0.01

Date Precipitation (inches)

Date Precipitation (inches)

Date Precipitation (inches)

27	0.19
28	0.25
29	0
30	0
2014	
Jul	sum
1	0
2	0
3	0
4	0
5	0
6	0
7	0
8	0
9	0
10	0
11	0
12	0
13	0
14	0
15	0
16	0
17	0
18	0
19	0
20	0
21	0
22	0
23	0.54
24	0.01
25	0
26	0
27	0
28	0
29	0
30	0
31	0
2014	
Aug	sum
1	0
2	0
3	0
4	0

5	0
6	0
7	0
8	0
9	0
10	0
11	0.01
12	0.34
13	0.78
14	0.01
15	0.03
16	0
17	0
18	0
19	0
20	0
21	0
22	0
23	0
24	0
25	0
26	0
27	0
28	0
29	0
30	0.5
31	0
2014	
Sep	sum
1	0
2	0.03
3	0
4	0
5	0
6	0
7	0
8	0
9	0
10	0
11	0
12	0
13	0
14	0

15	0
16	0
17	0.03
18	0.01
19	0
20	0
21	0
22	0
23	0.67
24	0.7
25	0.06
26	0.42
27	0.01
28	0
29	0.08
30	0
2014	
Oct	sum
1	0
2	0
3	0
4	0
5	0
6	0
7	0
8	0
9	0.01
10	0.03
11	0.36
12	0
13	0.21
14	0.28
15	0.32
16	0
17	0.06
18	0.08
19	0
20	0.29
21	0.04
22	1.14
23	0.34
24	0.35
25	0.26

Date Precipitation (inches)

26 0.15
27 0.02
28 0.51
29 0.08
30 0.48
31 0.66

2014

Nov sum

1 0.01
2 0.13
3 0.62
4 0.14
5 0.19
6 0.28
7 0
8 0
9 0.58
10 0
11 0
12 0
13 0
14 0
15 0
16 0
17 0
18 0
19 0.07
20 0.07
21 0.55
22 0.27
23 0.42
24 0.2
25 1.2
26 0.02
27 0.13
28 0.8
29 0.08
30 0

2014

Dec sum

1 0
2 0
3 0

Date Precipitation (inches)

4 0.03
5 0.1
6 0.19
7 0
8 0.27
9 0.43
10 0.58
11 0.22
12 0.15
13 0
14 0
15 0
16 0.04
17 0.14
18 0.36
19 0.03
20 0.85
21 0.05
22 0.01
23 0.66
24 0.22
25 0.01
26 0.01
27 0.19
28 0
29 0.02
30 0
31 0

2015

Jan sum

1 0
2 0.02
3 0.04
4 1.1
5 0.46
6 0
7 0.01
8 0
9 0
10 0.11
11 0.06
12 0
13 0

Date Precipitation (inches)

14 0
15 0.28
16 0.02
17 1
18 0.18
19 0.04
20 0
21 0
22 0.05
23 0.27
24 0.06
25 0
26 0
27 0
28 0
29 0
30 0
31 0

2015

Feb sum

1 0.15
2 0.18
3 0
4 0.34
5 0.72
6 0.38
7 0.88
8 0.12
9 0.25
10 0.01
11 0
12 0.04
13 0
14 0.04
15 0
16 0
17 0
18 0
19 0.1
20 0.04
21 0
22 0
23 0

Date Precipitation (inches)

Date Precipitation (inches)

Date Precipitation (inches)

24	0
25	0.09
26	0.2
27	0.85
28	0
2015	
Mar	sum
1	0
2	0
3	0
4	0
5	0
6	0
7	0
8	0
9	0
10	0
11	0.07
12	0.01
13	0.05
14	0.67
15	1.36
16	0
17	0.04
18	0
19	0
20	0.14
21	0.19
22	0.14
23	0.22
24	0.26
25	0.18
26	0
27	0.17
28	0.01
29	0
30	0
31	0.08
2015	
Apr	sum
1	0.07
2	0
3	0.15

4	0
5	0
6	0.05
7	0.08
8	0.2
9	0
10	0.26
11	0.08
12	0
13	0.26
14	0
15	0
16	0
17	0
18	0
19	0
20	0
21	0.01
22	0.01
23	0.07
24	0.46
25	0.06
26	0.01
27	0.02
28	0.1
29	0
30	0
2015	
May	sum
1	0
2	0
3	0
4	0.01
5	0.09
6	0
7	0
8	0
9	0
10	0
11	0.01
12	0.34
13	0.13
14	0.01

15	0
16	0
17	0
18	0
19	0
20	0
21	0
22	0
23	0
24	0
25	0
26	0
27	0
28	0
29	0
30	0
31	0
2015	
Jun	sum
1	0.05
2	0.09
3	0
4	0
5	0
6	0
7	0
8	0
9	0
10	0
11	0
12	0
13	0
14	0
15	0
16	0
17	0
18	0
19	0
20	0
21	0
22	0
23	0
24	0

Date Precipitation (inches)

Date Precipitation (inches)

Date Precipitation (inches)

25	0
26	0
27	0
28	0
29	0
30	0
2015	
Jul	sum
1	0
2	0
3	0
4	0
5	0
6	0
7	0
8	0
9	0
10	0
11	0
12	0
13	0
14	0
15	0
16	0
17	0
18	0
19	0
20	0
21	0
22	0
23	0
24	0
25	0
26	0.01
27	0
28	0
29	0
30	0
31	0
2015	
Aug	sum
1	0
2	0

3	0
4	0
5	0
6	0
7	0
8	0
9	0
10	0.02
11	0
12	0
13	0
14	0.31
15	0
16	0
17	0
18	0
19	0
20	0
21	0
22	0
23	0
24	0
25	0
26	0
27	0
28	0.03
29	1.01
30	0.66
31	0
2015	
Sep	sum
1	0.3
2	0.11
3	0.09
4	0
5	0
6	0.17
7	0.11
8	0
9	0
10	0
11	0
12	0

13	0
14	0
15	0
16	0.09
17	0.21
18	0
19	0
20	0.02
21	0
22	0
23	0
24	0
25	0.3
26	0
27	0
28	0
29	0
30	0
2015	
Oct	sum
1	0
2	0.04
3	0.04
4	0
5	0
6	0
7	0.29
8	0
9	0.03
10	0.46
11	0
12	0
13	0.05
14	0
15	0
16	0
17	0.08
18	0.04
19	0.14
20	0
21	0.01
22	0
23	0

Date Precipitation (inches)

Date Precipitation (inches)

Date Precipitation (inches)

24 0
25 0.29
26 0.35
27 0
28 0.23
29 0.17
30 0.81
31 1.78

2015
Nov sum

1 0.5
2 0.13
3 0.01
4 0
5 0.03
6 0
7 0.17
8 0.23
9 0.03
10 0.01
11 0.16
12 0.13
13 1.28
14 1.96
15 0.63
16 0.19
17 1.26
18 0.06
19 0.06
20 0
21 0
22 0
23 0.08
24 0.22
25 0
26 0
27 0
28 0
29 0
30 0.01

2015
Dec sum
1 0.5

2 0.1
3 0.45
4 0.24
5 0.26
6 0.24
7 1
8 1.96
9 0.45
10 0.5
11 0.07
12 0.58
13 0.09
14 0.06
15 0
16 0.11
17 0.97
18 0.78
19 0.07
20 0.13
21 0.99
22 0.3
23 0.29
24 0.17
25 0.05
26 0
27 0.29
28 0.03
29 0
30 0
31 0

2016
Jan sum

1 0
2 0
3 0.01
4 0.32
5 0.16
6 0
7 0
8 0
9 0
10 0
11 0.1

12 0.31
13 0.46
14 0
15 0.09
16 0.34
17 0.28
18 0.04
19 0.36
20 0.44
21 0.68
22 0.18
23 0.77
24 0
25 0
26 0.04
27 0.5
28 0.68
29 0.24
30 0.12
31 0.02

2016
Feb sum

1 0
2 0.02
3 0.27
4 0.24
5 0.21
6 0.21
7 0
8 0
9 0
10 0.04
11 0.48
12 0.34
13 0.5
14 0.22
15 0.1
16 0.07
17 0.39
18 0.1
19 0.35
20 0.1
21 0.14

Date Precipitation (inches)

22 0.15
 23 0
 24 0
 25 0
 26 0.2
 27 0.36
 28 0.57
 29 0.12
 2016
 Mar sum
 1 0.79
 2 0.2
 3 0.02
 4 0.13
 5 0.12
 6 0.16
 7 0.26
 8 0.17
 9 0.63
 10 0.27
 11 0.28
 12 0.19
 13 0.31
 14 0.6
 15 0.01
 16 0
 17 0.16
 18 0
 19 0.02
 20 0.16
 21 0.22
 22 0.03
 23 0.23
 24 0.32
 25 0
 26 0.15
 27 0.02
 28 0
 29 0
 30 0
 31 0

2016
 Apr sum

Date Precipitation (inches)

1 0
 2 0
 3 0.15
 4 0.16
 5 0
 6 0
 7 0
 8 0
 9 0
 10 0
 11 0
 12 0.49
 13 0.03
 14 0.26
 15 0
 16 0
 17 0
 18 0
 19 0
 20 0.02
 21 0.01
 22 0.2
 23 0.15
 24 0.35
 25 0.01
 26 0
 27 0
 28 0
 29 0.01
 30 0
 2016
 May sum
 1 0
 2 0
 3 0
 4 0
 5 0
 6 0
 7 0
 8 0
 9 0
 10 0
 11 0

Date Precipitation (inches)

12 0.08
 13 0
 14 0
 15 0.04
 16 0
 17 0
 18 0
 19 0.02
 20 0
 21 0.31
 22 0.12
 23 0
 24 0
 25 0
 26 0
 27 0
 28 0.05
 29 0.04
 30 0
 31 0
 2016
 Jun sum
 1 0.03
 2 0.04
 3 0
 4 0
 5 0
 6 0
 7 0
 8 0
 9 0.07
 10 0.33
 11 0.06
 12 0
 13 0.02
 14 0.38
 15 0.16
 16 0
 17 0.13
 18 0.03
 19 0
 20 0.46
 21 0

Date Precipitation (inches)

22	0
23	0.22
24	0.02
25	0
26	0
27	0
28	0
29	0
30	0
2016	
Jul	sum
1	0
2	0
3	0
4	0
5	0
6	0
7	0.12
8	0.19
9	0.1
10	0.01
11	0
12	0
13	0
14	0
15	0
16	0
17	0
18	0
19	0
20	0
21	0
22	0.19
23	0
24	0
25	0
26	0
27	0
28	0
29	0
30	0
31	0
2016	

Date Precipitation (inches)

Aug	sum
1	0
2	0
3	0
4	0
5	0
6	0
7	0.12
8	0.03
9	0
10	0
11	0
12	0
13	0
14	0
15	0
16	0
17	0
18	0
19	0
20	0
21	0
22	0
23	0
24	0
25	0
26	0
27	0
28	0
29	0
30	0
31	0.04
2016	
Sep	sum
1	0.11
2	0.25
3	0
4	0
5	0.02
6	0.37
7	0.01
8	0.01
9	0

Date Precipitation (inches)

10	0
11	0
12	0
13	0
14	0
15	0
16	0
17	0.42
18	0
19	0.14
20	0
21	0
22	0
23	0.03
24	0
25	0
26	0
27	0.08
28	0
29	0
30	0
2016	
Oct	sum
1	0.03
2	0.13
3	0.05
4	0.09
5	0.11
6	0.15
7	0.16
8	0.19
9	0.27
10	0.01
11	0
12	0
13	1.59
14	0.93
15	0.93
16	0.45
17	0.29
18	0.33
19	0.18
20	0.79

21	0.28
22	0.02
23	0.07
24	0.08
25	0.03
26	1.55
27	0
28	0.01
29	0.11
30	0.25
31	0.58

2016	
Nov	sum
1	0.12
2	0.36
3	0.01
4	0
5	1.38
6	0.01
7	0.05
8	0
9	0.09
10	0.01
11	0
12	0.03
13	0.33
14	0.42
15	1.21
16	0.11
17	0
18	0
19	0.01
20	0.02
21	0.14
22	0.38
23	0.14
24	0.89
25	0.02
26	0.34
27	0.28
28	0
29	0.02
30	0.16

2016	
Dec	sum
1	0.01
2	0.08
3	0.32
4	0.12
5	0.08
6	0.03
7	0
8	0.05
9	0.33
10	0.19
11	0.12
12	0.07
13	0.01
14	0
15	0
16	0
17	0
18	0
19	0.55
20	0.03
21	0
22	0.17
23	0.54
24	0
25	0
26	0.16
27	0.12
28	0
29	0.04
30	0
31	0.06

2017	
Jan	sum
1	0.17
2	0
3	0
4	0
5	0
6	0
7	0
8	0.34

9	0
10	0.18
11	0
12	0
13	0
14	0
15	0
16	0
17	1.19
18	0.74
19	0.06
20	0
21	0.07
22	0.01
23	0
24	0
25	0.04
26	0
27	0
28	0
29	0.01
30	0.01
31	0.01

2017	
Feb	sum
1	0
2	0
3	0.57
4	0.64
5	0.81
6	0.4
7	0
8	0.62
9	0.95
10	0.11
11	0
12	0
13	0
14	0.24
15	1.15
16	0.85
17	0
18	0.32

Date Precipitation (inches)

Date Precipitation (inches)

Date Precipitation (inches)

19	0.14
20	0.32
21	0.26
22	0
23	0.01
24	0
25	0
26	0.26
27	0.14
28	0
2017	
Mar	sum
1	0.13
2	0.12
3	0.44
4	0.07
5	0.03
6	0.23
7	0.56
8	0.18
9	0.87
10	0.05
11	0.25
12	0
13	0.59
14	0.44
15	0.85
16	0
17	0.5
18	0.49
19	0
20	0.06
21	0.26
22	0.05
23	0.27
24	0.17
25	0.05
26	0.5
27	0.07
28	0.19
29	0.48
30	0
31	0

2017	
Apr	sum
1	0.1
2	0
3	0
4	0.17
5	0.38
6	0.14
7	0.07
8	0.1
9	0
10	0.12
11	0
12	1.04
13	0.2
14	0.3
15	0.01
16	0
17	0.07
18	0.41
19	0.35
20	0.16
21	0
22	0.08
23	0.15
24	0.09
25	0.06
26	0.06
27	0.12
28	0.02
29	0.23
30	0
2017	
May	sum
1	0.02
2	0.08
3	0.05
4	0.28
5	0.03
6	0
7	0
8	0
9	0

10	0
11	0.46
12	0.19
13	0.1
14	0.26
15	0.33
16	0.27
17	0
18	0
19	0
20	0
21	0
22	0
23	0
24	0
25	0
26	0
27	0
28	0
29	0
30	0
31	0.1
2017	
Jun	sum
1	0.09
2	0
3	0
4	0
5	0
6	0
7	0.02
8	0.41
9	0.16
10	0
11	0
12	0
13	0
14	0
15	0.62
16	0.06
17	0.04
18	0.01
19	0